

AMENDMENTS TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. (Currently Amended) Method of illuminating at least two illumination points (401) by a-substantially uniform predefined amounts of energy provided by means of at least one spatial light modulator (10), said at least one spatial light modulator (10) comprising a plurality of light modulators (LM), wherebywherein the method comprising:

transmitting the predefined amounts of energy transmitted to said at least two illumination points; and (401)

at least partly controlling the predefined amounts of energy are at least partly controlled by varying the number of said light modulators (LM) illuminating said at least two points.

2. (Currently Amended) The Mmethod of illuminating at least two illumination points according to claim 1, wherebywherein said at least one illumination point (401) forms part of a light sensitive medium-(12).

3. (Currently Amended) The Mmethod of illuminating at least two illumination points according to claim 1 ~~or claim 2~~, wherebywherein the light modulators (LM) illuminating at least one of the at least two illumination points are light modulators of mutually different spatial light modulators.

4. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-3~~, wherebywherein the illumination is performed during a relative movement between the at least two illumination points (401) and the at least one spatial light modulator-(10).

5. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-4~~, wherebywherein at least one of the at least two illumination points-(401) is illuminated by a set of the light modulators (LM) of said at least one spatial light modulator-(10).

6. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-5, whereby~~wherein the illumination of at least two of the illumination points is obtained by predetermined light modulators (~~LM~~).

7. (Currently Amended) The Mmethod of illuminating at least two illumination points according to claim 6, ~~whereby~~wherein said predetermined light modulators (~~LM~~) form a mask pattern (~~LML~~).

8. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-7, whereby~~wherein said amount of energy is substantially the same in each illuminated point, when the illumination is completed.

9. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-8, whereby~~wherein the method further comprising:

moving a light modulating arrangement over a surface (~~12~~), said light modulating arrangement comprising said at least one spatial light modulator and said plurality of light modulators;

establishing at least one light modulation layout by said light modulating arrangement
~~establishing at least one light modulation layout (LML),~~ said at least one light modulation layout comprising at least one row (~~R0, R1,..~~) containing at least one light modulation point (~~LMP~~);
receiving said light energy received at a specific spot (~~401~~) on said surface (~~12~~), said received light energy being accumulated from the light energy received from each of said at least one light modulation points (~~LMP~~) of one of said at least one row (~~R0, R1,..~~) of one of said at least one light modulation layouts (~~LML~~); and

at least partly controlling said light energy received at said specific spot (~~401~~) on said surface (~~12~~) ~~being at least partly controlled by~~ varying the number of said at least one light modulation points (~~LMP~~) of said at least one row (~~R0, R1,..~~).

10. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of the claims 1-9, whereby~~wherein the number of light modulation points (~~LMP~~) is at least partly controlled by blocking some of the light modulators (~~LM~~).

11. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 1-10, whereby~~wherein at least one of the light modulators (~~LM~~) ~~chosen to blocked~~ is selected from defective light modulators (~~LM~~) of the at least one spatial light modulator (~~10~~).

12. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 10-11, whereby~~wherein at least one of the light modulators (~~LM~~) ~~chosen to blocked~~ is selected from light modulators (~~LM~~) corresponding to light modulation points (~~LMP~~) deviating from ~~the~~ desired light modulation point (~~LMP~~) characteristics.

13. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 10-12, whereby~~wherein ~~the~~ blocked light modulators (~~LM~~) form a time varying pattern.

14. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 10-13, whereby~~wherein a ~~the~~ number of light modulators (~~LM~~) to block is determined on the basis of an energy measurement of a ~~the~~ light modulation layout (~~LML~~).

15. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 1-14, whereby~~wherein an ~~the~~ energy measurement is performed on a ~~the~~ complete system comprising at least one light source (~~105~~), illumination optics (~~106~~, ~~107~~), at least one spatial light modulator (~~10~~) and imaging optics (~~107~~, ~~109~~).

16. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of the claims 9-15, whereby~~wherein the number and distribution of light modulators (~~LM~~) allocated for illumination of at least one of the at least two illumination points (~~401~~) are determined on the basis of an energy measurement of all light modulation layouts (~~LML~~) established by the light modulating arrangement.

17. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-16, whereby~~wherein the predefined amounts of energy transmitted to said at least two illumination points (401) are transmitted from two different spatial light modulators (10), respectively.

18. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 9-17, whereby~~wherein said light modulating arrangement further comprises at least one light source.

19. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-18, whereby~~wherein said predefined amounts of energy transmitted to said at least two illumination points (401) are established on the basis of ~~the~~ distribution of light intensity in both columns and rows of said spatial light modulator.

20. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-19, whereby~~wherein the energy transmitted via said spatial light modulator is measured in sub-regions of said columns and rows.

21. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-20, whereby~~wherein said sub-regions comprises the individual light modulators.

22. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-21, whereby~~wherein said light modulators (LM) illuminating said at least two points are selected among the light modulators providing ~~the~~ highest intensity.

23. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 7-22, whereby~~wherein at least one filter mask (FM) is established at least partly on the basis of an energy measurement of the light modulation layout (LML).

24. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-23, whereby~~ wherein said at least one filter mask (~~FM~~) is established at least partly on the basis of an energy measurement of at least two different light modulation layouts (~~LML~~).

25. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-234, whereby~~ wherein said at least one filter mask (~~FM~~) identifies at least one light modulator (~~LM~~) to be blocked.

26. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-25, whereby~~ wherein said at least one light modulator (~~LM~~) identified by said at least one filter mask (~~FM~~) is selected among the light modulators providing ~~the~~ least intensity.

27. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-256, whereby~~ wherein said at least one light modulator (~~LM~~) identified by said at least one filter mask (~~FM~~) is selected among ~~the~~ light modulators providing a light beam whose cross-section is distorted or stretched.

28. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-257, whereby~~ wherein said at least one light modulator (~~LM~~) identified by said at least one filter mask (~~FM~~) is selected among the light modulators providing a light beam whose cross-section is regular.

29. (Currently Amended) The Method of illuminating at least two illumination points according to ~~any of claims 1-238, whereby~~ wherein at least one group of light modulators (~~LM~~) is identified by said at least one filter mask (~~FM~~), ~~and~~ said at least one group comprises at least two adjoining light modulators.

30. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-23~~9, wherebywherein at least one full column (~~C0, C1,...~~) of one of said at least one light modulation layouts (~~LML~~) is identified by said filter mask (~~FM~~).

31. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 14-30~~, wherebywherein the result of said energy measurement of said light modulation layout (~~LML~~) is stored in a storage means.

32. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 14-31~~, wherebywherein a common energy level is determined at least partly on the basis of said energy measurement.

33. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-32~~, wherebywherein said common energy level is stored in a storage means.

34. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-32~~3, wherebywherein said filter mask (~~FM~~) is changed over time.

35. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-34~~, wherebywherein said changing of said filter mask (~~FM~~) is at least partly determined by the speed of said relative movement between said at least two illumination points (~~401~~) and said at least one spatial light modulator (~~10~~).

36. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-34~~5, wherebywherein said changing of said filter mask (~~FM~~) is at least partly determined by short-term intensity changes of said at least one light source.

37. (Currently Amended) The Mmethod of illuminating at least two illumination points according to ~~any of claims 1-23~~6, wherebywherein said at least one filter mask (~~FM~~) is applied to said at least one spatial light modulator before each exposure session.

38. (Currently Amended) The Mmethod of illuminating at least two illumination points according to any of claims 1-237, wherebywherein said at least one filter mask (FM) is applied to said at least one spatial light modulator on a real time basis.

39. (Currently Amended) The Mmethod of illuminating at least two illumination points according to any of claims 1-238, wherebywherein said at least one filter mask (FM) is applied to a the modulation raster image between each exposure session.

40. (Currently Amended) The Mmethod of illuminating at least two illumination points according to any of claims 1-39, wherebywherein said at least one filter mask (FM) is applied to the modulation raster image during exposure.

41. (Currently Amended) The Mmethod of illuminating at least two illumination points according to any of claims 231-40, wherebywherein said at least one filter mask (FM) is stored in a storage means.

42. (Currently Amended) The Mmethod of ~~illuminating at least two illumination points~~ according to claim 1, the method further comprising utilizing light modulating chips with one or more defective light modulators (LM), wherebywherein ~~the method of illuminating at least two points according to any of the claims 1-41 is used.~~

43. (Currently Amended) The Mmethod of ~~illuminating at least two illumination points~~ according to claim 1, the method further comprising compensating non-linearity or non-accuracy of an illumination system, the system comprising at least one spatial light modulator (10) and at least one thereto coupled input and output optics (105, 106, 107, 109) by means of the method according to any of the claims 1-41.

44. (Currently Amended) Illumination arrangement comprising:
at least one spatial light modulator~~(10)~~; and
at least one ~~thereto coupled~~ input and output optical system coupled thereto ~~(105, 106, 107, 109)~~, ~~said arrangement comprising means for performing a modulation of light according to any of the claims 1-43;~~

wherein said illumination arrangement is capable of illuminating at least two illumination points by substantially uniform predefined amounts of energy provided by said at least one spatial light modulator, wherein said at least one spatial light modulator comprises a plurality of light modulators, wherein the predefined amounts of energy transmitted to said at least two illumination points are at least partly controlled by varying the number of said light modulators illuminating said at least two points.

45. (Original) Illumination arrangement according to claim 44 wherein said input optical system comprises at least one light source.